

WHAT IS CLAIMED, IS:

1. A method for generating a screened representation of an image for printing said image, the method comprising:
 - 5 generating a first dot of said screened representation, wherein said first dot has a first dot size of at least two microdots; repeating said dot generation step until a first number of said first dots are generated;
 - arranging said first dots in a frequency modulated pattern;
 - 10 selecting a second number of second dots out of said first dots, wherein said second number is at most equal to said first number and larger than zero; and enlarging said second dots by adding at least one microdot to each of said second dots.
- 15 2. The method according to claim 1 further comprising:
 - using a third number, at most equal to said first number, of dots having said first dot size for reproducing portions of said image having densities at most equal to a predetermined density;
 - 20 and using said enlarged second dots for reproducing other portions of said image having densities larger than said predetermined density.
- 25 3. The method according to claim 1 further comprising:
 - generating a threshold mask array for said frequency modulated pattern; and subdividing said threshold mask array into a plurality of parcels wherein each of said parcels has a parcel size larger
 - 30 than said first dot size.
4. The method according to claim 3 further comprising enlarging said second dots to equal said parcel size.

- 12 -

5. The method according to claim 4 further comprising generating additional dots having said second dot size.

6. The method according to claim 2 further comprising:

5 generating a threshold mask array for said frequency modulated pattern; and

 subdividing said threshold mask array into a plurality of parcels wherein each of said parcels has a parcel size larger than said first dot size.

10

7. The method according to claim 6 further comprising enlarging said second dots to equal said parcel size.

8. The method according to claim 7 further comprising generating
15 additional dots having said second dot size.

9. A method for generating a screened representation of an image for printing said image, the method comprising:

20 generating a threshold mask array for a frequency modulated pattern;

 subdividing said threshold mask array into a plurality of parcels wherein each of said parcels has a parcel size of EndSize x Endsize microdots; and

25 generating a first number of first dots of said screened representation in said threshold mask array, wherein each of said first dots has a size of BeginSize x Beginsize microdots with Beginsize at least equal to two and smaller than Endsize.

10. The method according to claim 9 further comprising:

30 selecting a second number of second dots out of said first dots, wherein said second number is at most equal to said first number and larger than zero; and

 enlarging said second dots by adding at least one microdot to each of said second dots.

35

11. The method according to claim 10 further comprising enlarging each dot of said first number of first dots to a size of EndSize x EndSize microdots.
- 5 12. The method according to claim 11 further comprising generating additional dots having a size of to EndSize x EndSize microdots.
13. The method according to claim 9 wherein BeginSize equals two and EndSize equals three.
- 10 14. The method according to claim 1 further comprising exposing a printing plate precursor according to said screened representation of said image.
- 15 15. The method according to claim 2 further comprising exposing a printing plate precursor according to said screened representation of said image.
16. The method according to claim 9 further comprising exposing a
20 printing plate precursor according to said screened representation of said image.
17. The method according to claim 10 further comprising exposing a
25 printing plate precursor according to said screened representation of said image.
18. A printing plate having a screened representation of an image for printing said image, the screened representation obtained by the method of:
- 30 generating a first dot of said screened representation, wherein said first dot has a first dot size of at least two microdots;
repeating said dot generation step until a first number of said first dots are generated;
arranging said first dots in a frequency modulated pattern;

selecting a second number of second dots out of said first dots, wherein said second number is at most equal to said first number and larger than zero; and

5 enlarging said second dots by adding at least one microdot to each of said second dots.

19. A printing plate having a screened representation of an image for printing said image, the screened representation obtained by the method of:

10 generating a threshold mask array for a frequency modulated pattern;

subdividing said threshold mask array into a plurality of parcels wherein each of said parcels has a parcel size of EndSize x Endsize microdots; and

15 generating a first number of first dots of said screened representation in said threshold mask array, wherein each of said first dots has a size of BeginSize x Beginsize microdots with Beginsize at least equal to two and smaller than Endsize.

20 20. A data processing system for generating a screened representation of an image for printing said image by:

generating a first dot of said screened representation, wherein said first dot has a first dot size of at least two microdots;

25 repeating said dot generation step until a first number of said first dots are generated;

arranging said first dots in a frequency modulated pattern;

selecting a second number of second dots out of said first dots, wherein said second number is at most equal to said first number and larger than zero; and

30 enlarging said second dots by adding at least one microdot to each of said second dots.

21. A data processing system for generating a screened representation of an image for printing said image by:

generating a threshold mask array for a frequency modulated pattern;

subdividing said threshold mask array into a plurality of parcels wherein each of said parcels has a parcel size of
5 EndSize x Endsize microdots; and

generating a first number of first dots of said screened representation in said threshold mask array, wherein each of said first dots has a size of BeginSize x Beginsize microdots with Beginsize at least equal to two and smaller than Endsize.

10

22. A computer program product for generating a screened representation of an image for printing said image, the computer program product comprising:

15 first program instructions for generating a first dot of said screened representation, wherein said first dot has a first dot size of at least two microdots;

second program instructions for repeating said dot generation until a first number of said first dots are generated, wherein said first dots are arranged in a frequency modulated pattern;

20 third program instructions for selecting a second number of second dots out of said first dots, wherein said second number is at most equal to said first number and larger than zero; and

fourth program instructions for enlarging said second dots by adding at least one microdot to each of said second dots.

25

23. The computer program product according to claim 22 further comprising a computer readable medium wherein said first, second, third and fourth instructions are recorded on said medium.

30

24. The computer program product according to claim 22 further comprising:

fifth program instructions for using a number, at most equal to said first number, of dots having said first dot size for

reproducing portions of said image having densities at most equal to a predetermined density; and

sixth program instructions for using said enlarged second dots for reproducing other portions of said image having densities
5 larger than said predetermined density.

25. A computer program product for generating a screened representation of an image for printing said image, the computer program product comprising:

10 first program instructions for generating a threshold mask array for a frequency modulated pattern;

second program instructions for subdividing said threshold mask array into a plurality of parcels wherein each of said parcels has a parcel size of EndSize x Endsize microdots; and

15 third program instructions for generating a first number of first dots of said screened representation in said threshold mask array, wherein each of said first dots has a size of BeginSize x Beginsize microdots with Beginsize at least equal to two and smaller than Endsize.

20

26. The computer program product according to claim 25 further comprising a computer readable medium wherein said first, second and third instructions are recorded on said medium.